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ABSTRACT

Although verbosity in normal, healthy adults is a phenomenon that has been noted by researchers, the development of verbosity and its significance in relation to human aging has not been systematically examined. Verbosity is described as a pattern of off-target conversation characterized by intrusion of inappropriate information. Two studies were performed to develop measures of verbosity in elderly people and to determine the social and psychological correlates of verbose speech. In the first study, 346 elderly people were classified into three categories of verbosity on the basis of their verbal behavior during an interview and questionnaire session. Personality variables, stress in daily living, and age differentiated extremely verbose individuals from others. In the second study, quantitative ratings of frequency and extent of off-target speech were made for the verbal behavior of 203 older men, with a second rater independently making the same ratings for 98 of the men. Classification into the three categories of verbosity was made for 185 of the men. Rater reliability was established at .76 and .70 for the two measures of verbosity. There was significant agreement between the qualitative classification and the quantitative rating assessments of verbosity. In addition to the previously found associations between verbosity and personality variables, stress and age, greater declines in non-verbal intelligence from early adult levels predicted verbosity in late life. (Author/KS)

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Verbosity in Elderly People:

Measurement and Correlates

by

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Abstract

Two studies were performed to develop measures of verbosity in elderly people and to determine the social and psychological correlates of verbose speech. In the first study, 346 elderly people were classified into three categories of verbosity on the basis of their verbal behaviour during an interview and questionnaire session. Personality variables, stress in daily living and age differentiated extremely verbose individuals from others. In the second study, quantitative ratings of frequency and extent of off-target speech were made for the verbal behaviour of 203 older men, with a second rater independently making the same ratings for 98 of the men. Classification into the three categories of verbosity was made for 185 of the men. Rater reliability was established at .76 and .70 for the two measures of verbosity. There was significant agreement between the qualitative classification and the quantitative rating assessments of verbosity. In addition to the previously found associations between verbosity and personality variables, stress and age, greater declines in non-verbal intelligence from early adult levels predicted verbosity in late life.

VERBOSITY IN ELDERLY PEOPLE: MEASUREMENT AND CORRELATES

Verbosity in normal, healthy adults is a phenomenon that has been noted by researchers, particularly by those working with the elderly (Obler, 1980). However, the development of this behavior and its significance in relation to human aging has not been systematically examined. We have been investigating a particular form of verbosity, which we have labelled off-target verbosity. This paper reports two studies, whose results indicate that off-target verbosity can be identified and measured in healthy community-based elderly people and that such verbosity is differentially associated with psychological functioning.

Off-target verbosity is defined as speech that may be prompted by an external conversational stimulus such as a question, but that quickly becomes a prolonged series of loosely associated recollections of past experience. The speech becomes increasingly remote from the present stimulus situation and is relatively unconstrained by and irrelevant to external contextual stimuli. The continuous intrusion of irrelevant content results in the failure to maintain focus in off-target verbosity. This definition of off-target verbosity excludes speech that, although prolonged, remains focussed and elaborates a concept or follows a logical narrative sequence.

The following verbatim excerpt is taken from one of our recorded interviews and is presented as an example of the type of verbosity we are discussing.
Interviewer: "How many years of education do you have?"
Respondent: "Well, let's see. I went to school in _____, where uh, uh, I grew up in _____. Back in those days, why they didn't have the big high schools that they have now. When I went back there a few years ago in ...uh, I don't remember exactly when it was. I think it was the summer of 1980 or maybe it was

1981. I went for my brother's fiftieth anniversary and I didn't recognize the place at all. We went to a small school, the only school in town. It was the only place to go. All the children were in one room. The school only went to grade 9 or uh, uh, I think it was...was it grade 9? No, it was only grade 8 because _____(neighbor's daughter) left to go to nursing school and she had to go to _____ to finish grade 9. She never finished nursing anyway. She got married, but it didn't last long."

Reminiscence has long been reported to be very common among elderly people and has frequently been studied in attempts to determine its functional utility (Butler, 1963; Lewis & Butler, 1974). However, apart from the recognition of the utility of remininscence in maintainence of constancy of identity, the reminiscence literature appears to be able to report few well supported conclusions. Furthermore, verbalized reminiscence which intrudes excessively and inappropriately into conversation, as in the above example, is characteristic only of a minority of elderly people and has not been investigated in the general reminiscence literature.

Verbosity has been described as a symptom in psychopathology. For example, DSM III discusses circumstantiality, defined as speech that is indirect and delayed in reaching the point because of unnecessary, tedious details and parenthetical remarks. However, DSM III acknowledges that such speech is not necessarily associated with pathology and indeed may be common in people without mental disorder (APA, 1980). The Ganser syndrome, first reported by Ganser in 1898 (Ancill, 1986), refers to patients who talk past the point and give approximate answers, but unlike our community based elderly samples the patients are also described as being inconsistent, contradictory and disoriented. The verbal behaviour of these clinical samples does not appear similar to the verbose

behaviour of community based elderly samples.

Few studies of speech and communication in the normal elderly have examined off-target verbosity; however, some results appear relevant to the phenomenon. Obler (1980) compared narrative discourse in small samples of healthy and dementing elderly subjects. Compared to fifty-year-olds, subjects in their sixties had more elaborate speech, used more words and produced more embedded sentences but fewer themes. The speech of the healthy elderly appeared to be less focussed and more diffuse resulting in greater amounts of speech and appeared to fall midway between the speech of Parkinsonian patients and healthy younger subjects on these variables. The hypothesis that aging is associated with a tendency to use more words to express the same content is supported by the findings of Botwinick and Storandt (1974) who compared the responses of old and young adults to the Vocabulary subtest of the Wechsler Adult Intelligence Scale. The two age groups did not differ in the number of "good" definitions produced, but the older adults tended to give more multi-word definitions and fewer one-word synonyms.

In reviewing research on discourse skills in dementia, Obler and Albert (1985) note that in the early stages patients "may diverge from a story but will frequently be able to return to it; ....by the middle stage ....patients will make fragmented false starts and will repeat themselves at the sentence and story level; ... in the later, florid stage of the disease .... conversation is empty of content and discourse is disorganized and sterotypic" (p.470). Researchers working with moderately impaired patients have noted frequent instances of tangential and self-referential comments (Horner & Heyman, 1982) and have reported that, while some individuals become less talkative, others are given to uninterruptible press-of-speech (Olber & Albert, 1981).

Studies of verbal memory in elderly patients have also revealed findings that are relevant to the phenomenon of off-target verbosity. Spilich (1983) found that the recall of prose passages by elderly memory-impaired adults differed qualitatively and quantitatively, from that of elderly and young normal adults, being relatively insensitive to the thematic structure of the passage. Spilich explained the absence of thematic effects by hypothesizing that the memory-impaired elderly are unable to inhibit the entry of unwanted information from long-term memory into working memory. The model developed by Spilich assumes that in cases of memory impairment the contents of working memory are loaded in an uncontrolled fashion, resulting in a high rate of irrelevant intrusions. Such a model also explains the clinical findings that aged-impaired individuals are prone to intrude inappropriate verbal responses based on past experiences in everyday conversation. Fuld, Katzman, Davies and Terry (1981) found that inappropriate verbal intrusions were so characteristic of patient performance in mental status examinations in the early stages of Alzheimer's desease that they recommended that such word intrusions be considered a diagnostic index for Alzheimer's disease. A similar increased vulnerability to interference in verbal memory has been reported for healthy elderly samples, e.g. Moscovitch and Winocur, 1983; and Winocur and Moscovitch, 1983. As Spilich summarizes the behaviour, it is as if these people "frequently become unstuck from an appropriate contextual frame."

The speech of elderly dementia patients has also been examined in relation to the cooperative principle (Grice, 1975), which directs the appropriate interaction and contributions of two participants so that a conversational sequence can proceed in a mutually agreed upon direction. Hutchinson and Jensen (1980) found that the speech of dementia patients was characterized by the abrupt

introduction of unrelated themes in complete disregard of this principle. They argued that such verbal behaviour represented a form of egocentrism similar to the egocentrism of early childhood. The authors attributed the egocentrism in both cases to limited cognitive capacities, however, the egocentrism of the demented elderly was specifically attributed to decreases in previously adequate cortical capacity. It should be noted that the extended, irrelevant speech characteristic of verbosity also violates the conversational principle and thus also reflects egocentrism.

These latter studies report findings from clinical samples and, thus, cannot be generalized to community based, apparently healthy elderly people. However, the clinical findings are suggestive in that the off-target verbosity we have observed in some community dwelling elderly people shows a similar pattern of intrusion of inappropriate memories which are verbalized regardless of the conversational context. It is possible that off-target verbose speech might be an early indication of deteriorating memory function and underlying central nervous system deficit.

A number of exploratory hypotheses were developed in relation to off-target verbosity. Based upon the reminiscence literature, it was argued that verbosity and adjustment could be associated, either positively or negatively (Lowenthal, Thurner & Chiriboga, 1975; McMahon & Rhudick, 1964, 1967), since verbalized reminissence could serve a therapeutic function or alternatively could indicate unsatisfactory resolution of earlier developmental issues. It was also hypothesized that verbosity may be an age-related technique used to cope with difficulties associated with aging. This explanation was given by every individual working with the elderly with whom this phenomenon was discussed. These people believed that isolated and lonely older people become more demanding

in their social interactions in an attempt to compensate for their lesser number of social contacts. Thus, it was hypothesized that verbosity would be greater in people with less extensive social networks. The final hypothesis predicted that verbosity was related to declining cognitive function which reduced the individuals `ability to' reorganize information into a logical and coherent message.

STUDY 1

METHOD

Participants

The participants were 346 women and men, aged 65 years or older, with equal proportions of volunteers drawn from both genders, of Francophone and Anglophone ethnic status and middle and working class backgrounds (Blishen & McRoberts, 1976). The participants were recruited through community agencies for a study of personality and well being in old age. Personality, adjustment and social functioning measures were available for all 346 volunteers while cognitive measures were available for a subsample of 285 volunteers. The volunteers had a mean age of 72, 62, and a mean educational level of 11.01 yaears. The participants were all living independently in their own homes and were individually tested there.

Procedure

The participants were visited twice for a total of approximately three hours by one of five female interviewers, who had been trained to interview and administer the tests in a standardized fashion in either English or French. The interviewers had been trained to volunteer no extraneous information of their own and to adhere as strictly as possible to the interview and questionnaire items.

If a participant became verbose, the interviewers were instructed not to cut off the individual's speech abruptly but to persistently return to the scheduled order of items as soon as possible. In the first visit a life interview was conducted and the participant was given a battery of psychological tests to complete. The participants were given a series of measures of verbal memory in the second visit.

At the end of the second interview, on the basis of their interaction with the volunteers and without knowing the test results, the interviewers independently classified the subjects into one of three categories of verbosity. The three categories were: extreme talker (very verbose, speech consists of sequences of loosely associated topics, much extraneous information), controlled talker (chatty, talks a great deal but sticks more or less to the point even though much extra information is given) and non-talker (only answers questions asked and volunteers little extraneous information). Participants were classified as talkers only when their total session time was approximately double the average session time and when their responses were a series of loosely associated topics bearing little relation to the original question. Interviewers also had the option of not categorizing the participant when they were uncertain.

Follow-up telephone calls were made one year later to 200 of these volunteers by a different interviewer to discuss their participation in future research. This interviewer independently classified the participants into the same three categories based on global impression of verbosity.

Measures

The participants were given a series of standardized measures that have been used extensively with elderly samples to assess psychological functioning. The Eysenck Personality Inventory (EPI) (Eysenck & Eysenck, 1968) provided measures

of extraversion, neuroticism and lie or tendency to respond in a socially desirable way. The Memorial University of Newfoundland Scale of Happiness (MUNSH) (Kozma & Stones, 1983) assessed psychological well being. The Desire and Belief scale assessed the extent that reinforcers are desired by the individual and the perceived locus of control for these reinforcers (Reid & Ziegler, 1980). A checklist assessed the activities in which the participants regularly engaged (Arbuckle, Gold & Andres, 1986). The activities had been independently rated by 10 judges for the degree of social effort required and these were used to create weighted total social activity scores. A short form of the Holmes and Rahe Social Readjustment Scale (1967), which retained only items appropriate for older samples, measured the number of stressful events experienced in the past year. The individuals also rated the adequacy of different aspects of their lives, such as financial situation and health, for everyday functioning (Schonfield & Hooper, 1973). Three different tasks provided measures of memory and verbal comprehension; forward digit span, memory and comprehension of prose, and organization and free recall of a list of categorizable words. Recall scores on the tasks were summed to provide a memory index while the Modified Ratio of Repetition scores for clustering measured organization (Bower, Lesgold & Tienam,1969).

RESULTS

Of the 346 participants, 74 (21.4%) and 156 (45%) were classified as extreme talkers and non-talkers respectively. The remaining 116 (33.5%) participants were described as controlled talkers. Chi Square analysis indicated that marital status, gender and ethnicity did not differ among the groups. A Manova followed by anovas revealed a significant multivariate difference between the groups, F

(23,198) = 1.94, $p < .01$, with extreme talkers having significantly lower scores on the desire for reinforcers scale, F (1, 222) = 5.18, $p < .05$, $\omega^2 = .022$; lower self-ratings on adequacy of finances, F (1,222) = 4.23, $p < .05$, $\omega^2 = .014$; and being older, F (1,222) = 6.47, $p < .05$, ω^2 .024. Other differences showed that talkers were more extraverted, F (1,222) = 3.38, $p < .10$, ω^2 =.01; had lower social desirability set scores, F (1,222) = 3.38, $p < .10$, $\omega^2 = .01$; and had more difficulty with transportation, F (1,222) = 3,12, $p < .10$, $\omega^2 = .009$. To clarify the finding of significant differences on the desire for reinforcers scale, a post hoc factor analysis was performed on this scale. This analysis produced a first factor, accounting for 70% of the variance, which loaded on items assessing the subjects' desire for independence in their activities. Extreme talkers were significantly lower on a scale composed of items which loaded on this factor, F (1,222) = 6.78, $p < .05$, $\omega^2 = .025$, but did not differ significantly from non-talkers on the other items.

Percentage agreement among categories was used to determine the extent of agreement between the interview and telephone classifications of the participants into the verbosity categories. A total of 50% agreement on classification was obtained between the raters.

STUDY TWO

The agreement between raters in classifying subjects using the global qualitative method was low. Some of the lack of agreement between raters might be due to changes in verbal behaviour which occurred during the interval between assessments and to differences in verbal behaviour over the telephone as opposed to a person-to-person situation. However, it is likely that the subjectivity of

the global classification imposed inherent constraints on the reliability of the method. The second study was designed to develop a more reliable, quantitative method and to determine whether agreement existed between the two methods of assessing verbosity. The study was also designed to determine whether the same age, stress and personality factors would emerge as correlates of verbosity that had been found in the first study. Finally, additional measures of social and psychological functioning were included to further understanding of the phenomenon. In particular, more adequate measures of intellectual functioning were included in the study, utilizing archival data that allowed the examination of changes from early adult levels of intellectual functioning.

METHOD

Participants

The participants in this study were World War II Canadian army veterans who had volunteered to participate in a study examining their psychological functioning. With the cooperation of Canada Archives, veterans in Quebec and Ontario who had been in communication with this agency concerning their army service were sent letters briefly describing the study and asked to participate. In addition, cooperating veteran associations in Quebec and Ontario also sent the same letter to their membership. Finally, some veterans volunteered in response to articles describing the study which were published in local community newspapers and the Canadian Legion magazine. The participants were required to take part in a life-history interview and to complete measures of psychological and social functioning in either English or French. The volunteers were paid $20.00 for their time. Data relating to verbosity were collected for 203 veterans and will be reported here.

All participants were males. The sample had a mean age of 65.30 years and a mean educational level of 10.10 years. Blishen socioeconomic occupational prestige scores for the sample averaged 46.52, indicating that they had been employed in predominantly skilled upper working and lower middle class occupations (Blishen & McRoberts, 1976).

Measures

The participants were given a battery of standardized measures assessing psychological and social functioning, including measures which had been significant predictors of verbosity in the previous study. These were the Eysenck Personality Inventory (EPI) (Eysenck & Eysenck, 1968), the activities checklist and the Desire and Belief Locus of Control Scale (Reid and Zeigler, 1980). In addition, the Life Experiences Survey (LES) (Sarason, Johnson & Siegel, 1982) served as a measure of life stress, defined as the impact of the total number of life changes that had occurred within the past year of the participant's life. The measure was scored so that scores reflected the total number of events that had occurred and the rating of the perceived positive and negative impact of each event, with higher scores indicating more positive impact. The Social Support Questionnaire (SSQ) (Sarason, Levine, Basham & Sarason, 1983) assessed the extent of and perceived satisfaction with the support networks available to individuals. The participants were required to list all persons who provided them with support in different situations and their degree of satisfaction with the support received. Health of participants was assessed by the Seriousness of Illness Inventory (Wyler, Masuda & Holmes, 1971). The total score on this measure reflects the number and seriousness of disease syndromes the individual has, with seriousness determined by health professional ratings. Forward digit span was used as a measure of immediate memory.

The subjects also completed the Revised Examination "M" Test of Intelligence which they had taken for the first time approximately 40 years previously upon their induction into the army. The M test was developed in both French and English versions as a speeded group-administered test by the Canadian Army as an aid in classifying and assigning army recruits. The scale includes a non-verbal section consisting of three sub-tests: Picture Completion, Picture Anomalies, and Paper Formboard, a verbal section consisting of Arithmetic, Vocabulary, and Verbal Analogies, and a mechanical information section consisting of Tool Recognition and Mechanical Information. The M scale has been demonstrated to be of adequate validity and reliability (Blair, personal communication, 1959; Schwartzman, Gold, Andres, Arbuckle & Chaikelson, 1987).

Procedure

Each participant was given a detailed standardized interview which gathered basic demographic data and personal life history focussing on work and family data. Interviews were recorded on audiotapes so they could be scored by another independent rater for verbosity. Verbose speech was operationally defined as speech that was off-target when replying to a stimulus in the interview, in the sense that it conveyed information that was irrelevant to the question. This definition of verbosity as off-target speech excludes speech which remains focussed on the original stimulus and which develops a relevant response. Two scores were derived for off-target speech. Item verbosity consisted of the number of items in the standardized interview on which the participant had been rated as going off-target. In addition, each time that the individual went off-target, the interviewer rated the extent to which the person strayed from the topic on a five-point Likert scale. These ratings were summed to give the second measure, extent of verbosity. These same procedures were used later in the test session

when the subjects were completing the LES to obtain second pair of measures of verbosity, this time in a non-interview situation. At the end of the session, the interviewer rated the subject on global impression of verbosity. The same three categories derived in the first study were used; non-talker, controlled talker and extreme talker. The interviewers also had the option of giving a 'don't know' response. Finally, the interviewers recorded the duration of the entire session.

An independent rater later scored 48% of the tapes on the two quantitative measures, item verbosity and extent verbosity.

RESULTS

Inter-rater reliability coefficients were calculated between the verbosity ratings of the two independent raters for 98 interviews. There was significant agreement between the raters, with coefficients of .76 for number of items and .70 for extent of verbosity being obtained, ($p < .001$).

The two measures of verbosity, item verbosity and extent verbosity, were highly correlated in both the interview ($r = .89$, $p < .001$) and in the LES ($r = .87$, $p < .001$) situations for the total sample of 203 men. As can be seen in Table 1, the verbosity item and extent measures were found to be significantly correlated across the two situations. Since the verbosity item and extent measures in the two situations correlated significantly but at a moderate level, they were combined to form one set of verbosity measures, total number of items and total extent of verbosity. These two scores correlated significantly, $r = .90$, $p < .001$.

A total of 185 subjects were classified by the interviewers into one of the three categories of non-talker, controlled talker and extreme talker. As can be

seen in Table 2, 16% of the subjects were labelled extreme talkers. One-way analyses of variance were conducted comparing mean scores on the six item and extent verbosity measures across the three classifications. The three groups differed significantly on all the verbosity measures, $F(2,179) = 8.73$, $p < .001$, $\underline{W}^2 = .11$, and $F(2,179) = 11.28$, $p < .001$, $\underline{W}^2 = .12$ for item and extent verbosity in the interview situation, $F(2,179) = 6.00$, $p < .01$, $\underline{W}^2 = .06$; $F(2,167) = 8.21$, $p < .001$, $\underline{W}^2 = .09$ for item and extent verbosity in the LES situation, and $F(2,179) = 10.90$, $p < .001$, $\underline{W}^2 = .11$ and $F(2,179) = 14.50$, $p < .001$, $\underline{W}^2 = .15$ for the total item and total extent verbosity measures respectively. In addition, duration of time required to complete the interview and test session also differed significantly for the three classifications, $F(2,177) = 41.29$, $p < .001$, $\underline{W}^2 = .33$. As Table 2 indicates, Scheffé tests revealed that the non-talkers were significantly less verbose on all six measures and required less time to complete the session, $p < .05$. Extreme talkers had significantly higher extent of verbosity ratings in the interview and in their total extent of verbosity ratings than the controlled talkers, $p < .05$. Extreme talkers also required more time for the session than did the other two groups, $p < .05$.

Two multiple regression analyses were performed to determine the demographic and psychological variables that were significant predictors of total item and total extent verbosity. Age, socioeconomic status scores, marital status, ethnicity, desire and expectancy scores, LES scores, activities, extraversion, neuroticism, and lie EPI scores and availability of and satisfaction with social support scores were entered into the regression. In addition, difference scores reflecting decrease in performance on the M Test since young adulthood were also entered into the regression as well as the subjects' initial scores to act as a control for baseline ability. To assess the predictive power of the most

important variables in the study, the subset of significant predictors of verbosity which emerged from the initial regressions were employed in two subsequent reduced regressions.

A total of 15.3% of the variance in the total number of items on which subjects become verbose is accounted for by five variables in the study. Table 3 gives the Betas for the predictors, the zero-order correlation coefficients and the $\underline{sr}_i$ coefficients indicating the unique effect of each variable. Difference scores in abilities, EPI lie scores, stress, activities and extraversion are significant predictors of total item verbosity. Men who are more socially active, who have displayed greater decreases on measures of ability, who have less concern for socially desirable self-presentation, who are more extraverted and who have experienced more stress are verbose more frequently. The results are similar for the second measure, total extent verbosity, with 15.5% of the variance being accounted for by six of the study variables. Difference scores on the M Test, activities and EPI lie scores are significant predictors, while stress, marital status and extraversion predict verbosity at the .10 level. Men who have greater decreases in ability, lower scores on the social desirability scale, are presently unmarried, are more socially active, have experienced more negative ramifications of life change and are more extraverted display a greater degree of verbosity.

DISCUSSION

The results of the two studies have a number of noteworthy aspects, both with regard to the measurement of and the variables associated with verbosity. The significant degree of agreement between the two quantitative measures, the

total number of items on which and the total extent to which the person was off-target, as well as the significant degree of agreement between these measures when obtained in the interview and the questionnaire situation, indicate that verbose individuals tend to be so consistently. It is not just a few topics which stimulate off-target speech, but rather such responses seem to stem from a generalized set in which responses end up reflecting inner preoccupation rather than external stimuli. Furthermore, such preoccupation becomes verbalized in the interview session where it might be stimulated by the procedure and to a lesser extent in the questionnaire session where such verbosity is less likely to be elicited by the procedure. The results also clearly indicate that verbosity can be quantitatively assessed with a significant degree of agreement by different raters.

It is evident from the results of the studies that, to a significant extent, both the qualitative, categorizing method and the more molecular, quantitative approach are sampling the same process. Not only were there significant differences in quantitative scores among the three group classification, but there was also agreement in the pattern of variables associated with verbosity in the two studies using the two methods.

The revised hypothesis that emerged from the first assessment of verbosity using a qualitative approach, was that verbosity was predicted on the basis of older age, less desire for independent functioning, less concern for presenting oneself in a socially desirable way, extraversion and experiencing more stress. The results of the second study using a quantitative assessment of verbosity, partially replicate and extend these findings with a younger sample. In the second study, greater degree of experienced stress, less concern with making a socially desirable impression on others, greater social activity and extraversion

well as greater decreases in intelligence predicted higher frequency of verbosity. In addition, these variables, as well as unmarried status predicted greater extent of verbosity.

In the second study, age was eliminated as a significant predictor of verbosity, only when difference scores in ability were entered into the regression. Thus, verbosity appears to be related not to age but to decreases in intellectual ability. Since the difference scores reflected primarily differences in non-verbal fluid abilities, (Schwartzman et al, 1987), it appears that declining non-verbal ability is the main predictor of verbosity.

Variables assessing difficulties in functioning also predicted verbosity in the two studies. In the first study, specific indicators of stress were linked to excessive speech. In the second study a general life events measure revealed that verbose individuals had undergone greater negative ramifications of changes in their lives during the past year.

Personality variables also emerged consistently as significant predictors of verbosity in both studies. For both samples, lower tendency to present oneself in a socially desirable fashion and higher extraversion predicted verbosity. Lack of concern for social presentation of self can be interpreted as indicating egocentrism. Social activities also emerged as a significant predictor of verbosity in the second study, while desire for independent functioning was not a salient variable for this younger sample. It is noteworthy that for this all male sample, unmarried marital status was also linked to verbosity, since adult unmarried males have been frequently found to have greater psychological difficulties (Bachrach, 1975). It should be emphasized that there was no support for the hypothesis consistently advanced by people who work with the elderly, that talkative old people are lonely. In fact, the more verbose individuals are

more socially active.

With the inclusion of intelligence measures in the second study, cognitive variables emerged as significant predictors of verbosity. The nonverbal subtests, Picture Completion, Picture Anomalies and Spatial Reasoning, are conceptually similar to those measures usually regarded as sampling fluid intelligence, which have been shown to decline more rapidly with age than other aspects of intelligence (Horn, 1982). These results indicate that older people who are more likely to be verbose are probably likely to have had greater loss of ability to accurately monitor and understand the environment and to perform abstract reasoning.

Our research to this point establishes that off-target verbosity can be reliably measured and that it has consistent associations with psychological functioning. It become manifest with increasing age in people who are extraverted, socially active, not concerned with others' impressions of them, undergoing more stress and experiencing declining performance in cognitive functioning. The question may still be asked, what function does verbosity serve for these individuals. In a series of biographical sketches of aging people in an English village, Blythe (1981) postulates that incessant autobiographical talk is a way of maintaining identity by the elderly at a time when many significant signposts of their lives are being obliterated. The old see themselves as no one sees them any more, and as indeed, they no longer are. Recounting of past experience would serve to reassure the older person that their identity remains the same, a defence mechanism also suggested by Lieberman and Tobin (1983).

It is not clear whether the effects of the personality and social variables associated with verbosity are independent of or interact with biological aging. It is possible that individuals who are socially active and are less concerned

with others' impressions of them may have been inclined to be more talkative throughout their lifespan. Their verbal behaviour may become excessive only as they grow old and encounter the stresses associated with aging. It is possible that verbosity is a relatively benign behavioural variant, occuring in elderly people with certain characteristics and serving to maintain constancy of identity. Alternatively, the pattern of poorer cognitive functioning associated with verbosity may be indicative of central nervous system impairment. This hypothesis will be examined in future research.

Table 1

Correlation Coefficients for Verbosity Measures

(n = 203)

	INTERVIEW VERBOSITY	
LES Verbosity	Number of Items	Extent of Verbosity
Number of Items	.46*	.42*
Extent of Verbosity	.38*	.40*

*$p < .001$

Table 2

Means and SDs for Analysis of Variance Results by Verbose Classification

	GROUPS		
Measures	Non-Talkers (n = 64)	Controlled Talkers (n = 83)	Extreme Talkers (n = 32)
Interview Item Verbosity	6.03 $(5.65)_a$	9.34 $(7.07)_b$	11.62 $(7.10)_b$
Interview Extent Verbosity	9.81 $(13.17)_a$	17.24 $(15.46)_b$	25.09 $(17.78)_c$
LES Item Verbosity	.46 $(.91)_a$	1.44 $(2.36)_b$	1.58 $(1.65)_b$
LES Extent Verbosity	.57 $(1.12)_a$	2.08 $(3.51)_b$	3.20 $(3.75)_b$
TOTAL Item Verbosity	6.49 $(6.08)_a$	10.78 $(8.54)_b$	13.56 $(7.75)_b$
TOTAL Extent Verbosity	10.32 $(13.77)_a$	19.32 $(16.31)_b$	28.29 $(19.37)_c$
Duration of Session[a]	188.93 $(33.62)_a$	221.06 $(37.29)_b$	270.03 $(59.14)_c$

[a] Duration is indicated in minutes.

^{a}, ^{b}, ^{c}, Means with different subscripts differ significantly at $p < .05$.

Table 3

Results of Multiple Regression Analyses

Significant Predictors of Total Item Verbosity

Predictors	r	Beta	sri	F
M Test Difference Scores	-.25	-.2369	-.20	9.74***
Lie Scores	-.18	-.1521	-.15	4.94**
Activities	.14	.1529	.15	4.95**
Stress[a]	-.11	-.1389	-.14	4.37**
Extraversion Scores	.14	.1418	.14	4.01**

R^2= 15.3%

Significant Predictors of Total Extent Verbosity

Predictors	r	Beta	sri	F
M Test Difference Scores	.24	.2244	.19	8.55***
Activities	.16	.1632	.17	6.15***
Lie Scores	-.18	-.1501	-.15	4.76**
Extraversion Scores	.13	.1256	.12	3.13*
Stress[a]	-.09	-.1170	-.13	3.09*
Marital Status[b]	-.11	-.1116	-.11	2.75*

$\underline{R}^2$= 15.5%

*$\underline{p}$< .10, **$\underline{p}$< .05, ***$\underline{p}$< .01.

[a] Stress is scored so that lower scores indicate more negative impact.

[b] Marital status is dummy coded so that lower scores indicate unmarried status.

REFERENCE NOTE

Blair, W.R.N. Personal Communication, 1959.

References

American Psychiatric Association (1980). Diagnostic and Statistical Manual of Mental Disorders; Third Edition. Washington, D.C., APA.

Ancill, R.J. (1986). The grey area of geropsychiatry: Pseudodementia, Gerontion, March/April.

Arbuckle, T.Y., Gold, D. & Andres, D. (1986). Cognitive functioning of older people in relation to social and personality variables. Psychology and Aging 1, 55-62.

Bachrach, L.L. (1975). Marital status and mental disorder: An analytical review (NIMH Publication # 75-217). Washington, D.C.: US Government Printing office.

Blythe, R. (1981). The View in Winter: Reflections on Old Age. London: Penguin Books.

Blishen, B.R., & McRoberts, H.A. (1976). A revised socieconomic index for occupations in Canada. Canadian Revue of Sociology and Anthropology, 13, 71-79.

Bower, G. H. Lesgold, A.M. & Tienam, D. (1969). Grouping operations in free recall. Journal of Verbal Learning and Verbal Behavior, 8, 481-493.

Butler, R. (1963). Life review: An interpretation of reminiscence in the aged. Psychiatry, 26, pp.65-76.

Eysenck, H.J., and Eysenck, S.B.G. Manual: Eysenck Personality Inventory. San Diego, California. Educational and Industrial Testing Service, 1968.

Fuld, P., Katzman, R., Davies, P. & Terry, R.D. (1981). Intrusions as a sign of Alzheimer dementia: Chemical and pathological verification. Annals of Neurology, 11, 155-159.

Grice, H.P. (1975). Logic and conversation. In P. Cole & J.L. Morgan (Eds.), Syntax and Semantics: Speech Acts, Vol 3. New York: Academic Press.

Holmes, T.H., & Rahe, R.H. (1967). The social readjustment rating scale. Journal of Psychosomatic Research, 11, 213-218.

Horn, J.L. (1982). The aging of human abilities. In Wolman & G. Stricker, (Eds.) Handbook of Developmental Psychology, New Jersey: Prentice-Hall.

Horner, J. & Heyman, A. (1982). Characteristics of spoken language in Alzhermer's Dementia. Paper presented at International Neuro-Psychological Society, Pittsburg.

Hutchinson, J.M. & Jensen, M. (1980). A pragmatic evaluation of discourse communication in normal and senile elderly in a nursing home. Language and Communication in the Elderly, In L.K. Obler & M.L. Albert (Eds.), New York: Lexinton Books.

Kozma, A. & Stones, M.J. (1983). Predictors of happiness. Journal of Gerontology, 38, 626-628.

Lieberman, M.A. & Tobin, S.S. (1983). The experience of old age: Stress, coping and survival. New York: Basic Books.

Lewis, M.I. & Butler, R.N. (1974). Life review therapy; Putting memories to work in individual and group psychotherapy. Geriatrics, 29, 165-173.

Lowenthal, M.F., Thurner, M., Chiriboga, D. & Associates (1975). Four stages of life: A comparative study of women and men facing transitions. San Franciso: Jossey-Bass.

McMahon, A.W. & Rudich, P.J. (1964). Reminiscing: Adaptational significance in the aged. Archives of General Psychiatry, 10, 292-298.

McMahon, A.W. & Rudich, P.J. (1967). Reminiscing in the aged: An adaptational response. In S. Levin & R. Kahana (Eds.) Psychodynamic Studies and Aging: Creativity, Reminiscing and Dying. New York: International Universities Press.

Moscovitch, M. & Winocur, G. (1983). Contextual cues and please from proactive inhibition in young and old people: Canadian Journal of Psychology, 37, 331-344.

Obler, L.K. (1980). Narrative discourse style in the elderly. In L.K. Obler and M.L. Alber (Eds.), Language and communication in the elderly. New York: Lexington Books.

Obler, L. & Albert, M.L. (1985). Language skills across adulthood. In J.R. Birren & K.W. Schaie (Eds.), Handbook of the Psychology of Aging, 2, 463-473. New York: Van Nostrand Reinhold.

Reid, D.W., & Ziegler, M. (1980). Validity and stability of a new desired control measure pertaining to psychological adjustment of the elderly. Journal of Gerontology, 35, 395-402.

Sarason, L.G., Johnson, J.H., and Seigel, J.M. (1982). Assessing the impact of life changes. In I.G. Sarason and C.D. Spielberger (Eds.), Stress and Anxiety (Vol.VI), New York: Wiley.

Sarason, I.G., Levine, H.M., Basham, R.B., and Sarason, B.R. (1983). Assessing social support: The social support questionnaire. Journal of Personality and Social Psychology, 44, 127-139.

Schonfield, D. & Hooper, A. (1973). Future commitments and successful aging: Special groups. Journal of Gerontology, 28, 189-196.

Schwartzman, A.E. Gold, D. Andres, D., Arbuckle, T. & Chaikelson, J. (1987). Stability of intelligence: A 40-year follow-up. Canadian Journal of

Psychology, in press.

Spilich, G.J. (1982). Life-span components of text processing: Structural and procedural differences. Journal of Verbal Learning and Verbal Behavior, 231-244.

Winocur, G. & Moscovitch, (1982). Paired associate learning in institutionalized and noninstitutionalized old people: An effect of interference and context effects. Journal of Gerontology, 38, 455-464.

Wyler, A.R., Masuda, M. & Holmes, T.H. (1971). The magnitude of life events and seriousness of illness. Psychosomatic Medicine, 33, 115-122.